

Safety

Safety technology applications include ideas that reduce or eliminate hazards from specific construction tasks that are most associated with injury or accident (falls, back injury, trenching, or digging accidents).

Technology Scanning

One of PATH's major research support services is PATH Technology Scanning. *Technology Scanning* tells us about technology developments in other industries, from other nations, from federal laboratories, and from other building sectors. PATH looks for breakthroughs in other industries that could be transferred and applied to housing. *Technology Scanning*—published by the U.S. Department of Housing and Urban Development/PATH and prepared by the NAHB Research Center, Inc.—are updated as technology developments dictate. The Research Center works to unite technology developers from outside of residential construction with manufacturers in the residential housing sector.

This issue of *Technology Scanning* is one in a series. Each issue in the series falls into one of the following categories:

- *Design and Internet Tools*
- *Safety*
- *Surfaces and Interior Finishes*
- *Building Envelope Technologies*
- *Electrical*
- *Plumbing*
- *Heating, Ventilating and Air Conditioning*
- *Energy/Power Systems Generation*
- *Basic Materials*
- *Information Technology*
- *Sustainable Design Strategies*
- *Materials Recycling and Reuse*
- *Thermal and Moisture Protection*
- *Indoor Environmental Quality*

Call the ToolBase Hotline at 800-898-2842 for information about other available *Technology Scanning* issues. Or, log onto pathnet.org and www.toolbase.org.

PATH

451 7th Street, SW
Washington, DC 20410
Email: pathnet@pathnet.org

Safer Digging Near Utilities

Soft trencher, a new technology in excavating equipment, uses supersonic air to break soil. Loosened dirt can then be vacuumed away. It is harmless to buried utilities and safer for the operator. It clears a one foot wide trench (wider with multiple passes) up to a depth of 10 feet @ 15cfm/min.

Contact:

Steve Okonek
Electric Power Research Institute
3412 Hillview
Palo Alto, CA 94304-1395
Phone: 850-855-1068

Safer Inspection

Climber Robot is a mobile robot that propels itself vertically for inspection to perform remote sensing of man-made structures. Applications today include shipbuilding, aircraft inspection, bridge inspection, and building inspection. It could be used in inspecting roofs, second story applications, foundation or trenches, where the person inspecting may be at risk for fall or injury.

Contact:

Vanderbilt University
Office of Technology Transfer
Nashville, TN
Phone: 615-343-2430

Safety Equipment from Logging Industry

This firm from the logging industry provides some of the best safety devices for the logging industry and is now entering the construction industry. One of its construction safety products is a new state-of-the-art Ultra-Jack Scaffold system. Other products include fall-arresters, roof brackets, and wind anchors.

Contact:

Qual Craft Industries, Inc.
Stoughton, MI
Phone: 781-344-1000
www.qualcraft.com

Safe Excavation

Safe Excavation is an electronic device that attaches to a backhoe, providing real time warning of a utility line immediately ahead of the digging tool. It can detect and provide depth, location, and size of buried cables, gas lines, or toxic waste lines. It attaches to trenchers, backhoes, and other digging machines. It is ready for commercialization with proper financing. They are working also on an enhanced version that detects plastic-coated lines and fiberoptic lines.

Contact:

Leonhard Bernhold
Associate Professor of Civil
Engineering
North Carolina State University
Phone: 919-515-3677

Research to Reduce Construction Back Injuries

North Carolina State Industrial Engineering Department, Ergonomics Lab, is doing motion analysis on jobsites. From that research they hope to develop prototype tools using lumbar motion monitors, as well as develop comparative tool and equipment testing and analysis.

Contact:

Dr. Steven Lorenc
Association Director
Center for Construction Technology
and Integration
North Carolina State University
Campus Box 7908
Raleigh, NC 27695-7908
Phone: 919-515-3677